bio-protocol Preprint

Not Peer Reviewed
Ask a question online

Neonatal odor conditioning

HS Hitoshi Sakano

Updated date: Aug 6, 2022

An abbreviated version of this protocol was published in eLIFE in Mar 2021

The olfactory critical period is determined by activity-dependent Sema7A/PlxnC1 signaling within glomeruli

DOI: 10.7554/eLife.65078

Detailed protocol

Neonatal odor conditioning

Before conditioning, only foster mother mice were pre-exposed to the odor in a cage (26×40×18 cm) for 10 min, three times a day for 3 consecutive days, to habituate the odor and paper. A filter paper (2×2 cm) spotted with a test odorant was placed near the mice. After pups were born, they were grown with the foster mother in the experimental room until the test. For conditioning, a filter paper was put 1cm away from the nest then pups were exposed to the odor for 10 min with the foster mother, three times a day for 3 consecutive days. Odor concentration was 0.5 µl of 20 mM for vanillin (VNL) or 100 mM for 4-methyl-thiazole (4MT) (Wako).

How to cite:(Readers should cite both the Bio-protocol preprint and the original research article where this protocol was used)

1. Sakano, H. (2022). Neonatal odor conditioning. Bio-protocol Preprint. bio-protocol.org/prep1848.
2. Inoue, N., Nishizumi, H., Ooyama, R., Mogi, K., Nishimori, K., Kikusui, T. and Sakano, H.(2021). The olfactory critical period is determined by activity-dependent Sema7A/PlxnC1 signaling within glomeruli. eLIFE. DOI: 10.7554/eLife.65078

Copyright: Content may be subjected to copyright.